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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,643	03/25/2004	Katsuji Kimura	NEC 89507	6102
27667	7590	09/12/2005		
HAYES, SOLOWAY P.C. 3450 E. SUNRISE DRIVE, SUITE 140 TUCSON, AZ 85718			EXAMINER NGUYEN, PATRICIA T	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 09/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,643

Applicant(s)

KIMURA, KATSUJI

Examiner

Patricia T. Nguyen

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/20/04, 3/25/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1- 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Andoh et al., U.S. Patent # 5,936,466.

Figs. 8 and 9 of Andoh et al. discloses a circuit comprising: in Fig. 9, transistors 56, 57 can be read as a detection circuit; terminals Vout+, Vout- can be read as differential output terminals; circuits 35, 36 can be read as a differential output circuit; circuit 38 can be read as an operational transconductance circuit; voltage Reference Vref can be read as a first reference voltage; nodes at drains of transistors 42, 44 can be read as a differential output of the differential output circuit (see spec. col. 4, lines 23-34).

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 7, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Brenden, U.S. Patent # 6,784,698 B1.

Figs. 2 and 4 of Brenden disclose a circuit comprising: in Fig. 4, resistors R, 2R at gate of transistor M27 can be read as a detection circuit; in Fig. 2, terminals connect between GM34 and Gain & Compensation 36 can be read as differential output terminals; amplifiers 34, 36, 38 can be read as a differential output circuit; circuit CMFN 46 can be read as an operational transconductance circuit; voltage Reference to CMFN 46 can be read as a first reference voltage; nodes connection between GM34 and Gain & Compensation 36 can be read as a differential output of the differential output circuit (see spec. col. 5, lines 5-22).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brenden, U.S. Patent # 6,784,698 B1.

Although Brenden does not mention that the operational transconductance circuit inputs/outputs multiple currents of the same phase, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to design the operational transconductance circuit to inputs/outputs multiple currents of the same phase in order to meet system requirements and to have an optimum working condition for the circuit.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents # 5,990,737, # 6,774,722 B2, # 5,194,831 contain some limitations of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia T. Nguyen whose telephone number is (703) 308-1927. The examiner can normally be reached on 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 703-309-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PTN  
September 5, 2005

**PATRICIA NGUYEN**  
**PRIMARY EXAMINER**

*Patricia Nguyen*